

February 7, 9^h P.M.—The tail is much fainter and is reduced to a thin nebulous streak extending from Fomalhaut (over which it passes) up to a little north of γ *Phœnicis*, passing directly over α *Phœnicis*; sky thick below Fomalhaut.

We have had a great many meteors—one extraordinary one on Monday morning, February 2, about 10^h A.M., which was seen at different places over 200 miles apart. One correspondent describes it as a large ball of fire, as large as the sun, which descended towards the S.W. from an altitude of 60°.

Observatory, Adelaide,
 1880, February 7.

Mr. L. A. Eddie's Observations of the Great Southern Comet
 1880, I. at Graham's Town.

The following is an account of Mr. L. A. Eddie's observations at Graham's Town, derived partly from a letter to the Astronomer Royal and partly from particulars published in the *Eastern Star* newspaper:—

Mr. Eddie first saw the tail on Feb. 2, when it was about 1° in breadth, stretching upwards from the constellation *Piscis Australis* to β *Gruis*, 20° above the horizon. It had a decided curvature concave to the south, and shone with a light of a pale straw colour about equal in brightness to that of the Milky Way, and far more brilliant than on any subsequent evening.

Feb. 3 was cloudy and on Feb. 4 the comet's tail was found to have moved eastward about 20°. It was now 40° in length, passing over β *Piscis Australis*, and θ *Phœnicis*, and terminating near a small star about 5° below ζ *Phœnicis*. It had completely lost its curvature. On account of cloud low down, Mr. Eddie was unable to ascertain whether the nucleus was above the horizon.

On Feb. 5, the sky being very clear, Mr. Eddie discovered about 8^h p.m. with a 3-inch refractor, using a power of 80, a faint nucleus about equal in size to the annular nebula in *Lyra*, and resembling 47 *Toucani*, Lacaille's globular cluster, when viewed with a power too low to resolve it. It was of a pale yellow colour, condensed at the centre, and situated about 3° *sp* from Fomalhaut. The tail proceeded from an arc of the nucleus equal to a sixth of the circumference, and spread out as a fan till it reached a breadth of about 1° at a distance of about 20° from the nucleus, and preserved this breadth with but a small, if any, increase to about 50° from the nucleus, where it faded away from sight. The outline throughout the whole length was tolerably well defined, and to the naked eye that part of the tail appeared brightest which lay between 5° and 10° from the nucleus. The tail passed over γ *Piscis Australis*, ϵ and λ *Phœnicis*, and terminated at ρ *Phœnicis*, though by a side glance it could be traced as far as q^1 and q^2 *Eridani*.

On Feb. 6 clouds hid the nucleus. The tail passed over β *Sculptoris*, κ , μ , β and δ *Phœnicis* and χ *Eridani*, terminating near ϕ *Eridani*.

Feb. 7.—Nucleus so close to γ *Sculptoris* that to the naked eye it appeared as if this small star constituted the nucleus. In the 3-inch refractor, with a power of 50 or 60, the nucleus at 8^h 30^m was *nf* the star at a distance of a little less than half the field. At 9^h 15^m the nucleus was one-third of the field from the star, and was observed till 9^h 20^m when it was apparent that it would not transit over γ *Sculptoris* but would pass a little to the east. The coma was not distinguishable from the nucleus, but was condensed at the centre. The tail extended from γ *Sculptoris* nearly to κ *Eridani*, passing north of α *Phœnicis*, over ν and another small star near χ *Phœnicis*.

Feb. 8.—The comet, on account of increasing faintness, was not visible till 7^h 50^m, and the nucleus was only found, after much search, at 8^h 40^m, about 5° E. by N. of γ *Sculptoris*, in R.A. 23^h 30^m, Dec. 35° S. approximately. The difficulty in finding it arose from the circumstance that the tail appeared to start from a point a little above the nucleus, the faint light of the comet being obscured near the horizon. The tail passed over ϵ and γ *Phœnicis*, and, passing a little to the right of κ *Eridani*, extended right across the constellation *Microscopium*. The light had now become so faint that the comet might easily escape observation.

Feb. 9.—Cloudy. Comet not seen.

Feb. 10.—Evening still cloudy. Comet visible for short intervals. The nucleus was seen in the telescope almost in the same field with θ *Sculptoris*. The tail passed over ι , θ and ϵ *Eridani*, and across the constellation *Horologium*.

Feb. 11.—Cloudy. Comet not seen.

Feb. 12.—Cloudy. A slight hazy light to be seen now and then through openings in the clouds.

The tail after the first evening was perfectly straight and colourless.

Observations of the Great Southern Comet 1880, I. made at the Cape of Good Hope, Feb. 2 to Feb. 15. By David Gill, Esq.

(Extracts from letters to the Astronomer Royal.)

By last mail I wrote to tell you that we have a comet by the tail, and I am sorry to say that we only have him by the tail still.

To get any observations at all it was necessary to go to Sea Point, to command the sea horizon to the S.W. of Table Mountain. I selected Mr. Henry Solomon's Garden as the best site, and the site where Maclear observed Donati's Comet in 1858.

I took the Dollond 10-inch altazimuth and a couple of chronometers there on the evening of Tuesday the 3rd inst., but the horizon was somewhat hazy and β *Piscis Australis* could hardly be made out, and the tail could not be traced so far.